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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,063	02/13/2004	Youji Notoya	2004_0215A	5638

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EXAMINER	
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ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,063	NOTOYA ET AL.	
	Examiner	Art Unit	
	Chikaodili E. Anyikire	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *20050912*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application is responsive to application number (10777063) filed on February 13, 2004. Claims 1-15 are pending and have been examined.

Information Disclosure Statement

2. Acknowledgement is made of applicant's information disclosure statement.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic error.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14 and 15 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. An acceptable form of the preamble of claim 14 reads, "A computer readable medium encoded with computer executable instructions

for coding a moving picture signal on a picture-by-picture basis and generating a coded stream, said computer executable instructions performing:" and an acceptable form of the preamble of claim 15 reads, "A computer readable medium encoded with computer executable instructions for decoding a coded stream on a picture-by-picture basis, said computer instructions performing:". See "101 Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", Annex IV, Computer-Related Non-Statutory Subject Matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3-5, 8, and 12-15 (to be changed) rejected under 35 U.S.C. 102(b) as being anticipated by Boon et al (EP 0 971 543 A1).

As per claim 1, Boon et al disclose a moving picture coding method for coding a moving picture signal on a picture-by-picture basis and generating a coded stream, the method comprising (Fig 3):

a flag information generation step (Fig 3, 433) of generating flag information indicating that a picture order is non-sequential ([0105] and [0141]); and

an information insertion step of inserting the flag information into the coded stream (Figs 5 and 6; [0141], [0150] and [0190]).

As per claim 3, Boon et al disclose the moving picture coding method according to claim 1, wherein in the flag information generation step when values indicated by coding order information of the pictures are in non-sequential order, it is determined that the picture order is non-sequential (Fig 5a, [0105], [0141]; Table 4, 814).

As per claim 4, Boon et al disclose the moving picture coding method according to claim 1, wherein in the information insertion step, the flag information (Fig 5a, Hfd) is inserted between two pictures in the coded stream (Fig 5a shows that the flag is inserted in between the end of the previous "I" picture and current "I" picture), said two pictures being non-sequential in picture order (Fig 5a, [0167]).

As per claim 5, Boon et al disclose the moving picture coding method according to claim 1, further comprising a position information generation step (Fig 3, 433) of generating position information (Fig 5a, Had, alignment data) for identifying a position where the picture order is non-sequential ([0150], the flag is also able to provide a position of the current picture since it is inserted between two pictures), and

wherein in the information insertion step, the position information is inserted together with the flag information (Fig 5a, Hfd and Had, [0150]).

As per claim 8, Boon et al disclose a moving picture decoding method for decoding a coded stream on a picture-by-picture basis (Fig 8, [0215]), the method comprising:

an information extraction step (Fig 8, 502) of extracting flag information indicating that a picture order is non-sequential ([0216] and [0217]); and

a management step (Fig 8, 521) of managing an area for storing a decoded picture based on the flag information ([0220] – [0222]).

Regarding claim 12, arguments analogous to those presented for claim 1 are applicable to claim 12.

Regarding claim 13, arguments analogous to those presented for claim 8 are applicable to claim 13.

Regarding claim 14, arguments analogous to those presented for claim 1 are applicable to claim 14.

Regarding claim 15, arguments analogous to those presented for claim 8 are applicable to claim 15.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 2, 6, 7, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boon et al (EP 0 971 543 A1) in view of Teo et al (US 5,621,464).

As per claim 2, Boon et al disclose the moving picture coding method according to claim 1, wherein in the flag information generation step when values indicated by display order information of the pictures are in non-sequential order (Fig 3, 433; [0141]).

However, Boon et al does not explicitly teach when values indicated by display order information of the pictures are in non-sequential order, it is determined that the picture order is non-sequential.

In the same field of endeavor, Teo et al teaches obviously that when values indicated by display order information of the pictures are in non-sequential order, it is determined that the picture order is non-sequential (Col 1 Ln 29-40; Col 3 Ln 55-63).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the image coder of Boon et al with the method of Teo et al. It is well known knowledge that with motion prediction specifically B-pictures that the picture order becomes non-sequential. The advantage would be that

it notifies the image coding system to correct the picture order sequence, which results in reduction in memory buffer, power consumption and cost (Teo et al; Col 6 Ln 7-11).

As per claim 6, arguments analogous to those presented for claims 1 and 2 are applicable to claim 6.

As per claim 7, Boon et al disclose the moving picture coding method according to claim 6, wherein in the coding step (Fig 3, 414; [0142]), a display order of pictures in the predetermined coding unit is sequential (Fig 5a; the predetermined coding unit consist of a plurality of I-frames, which would be a sequential display order), and is located earlier than a display order of pictures in a predetermined coding unit immediately following said predetermined coding unit in coding order (Fig 5a, the prior art shows the coding unit being displayed earlier than a predetermined coding unit).

As per claim 9, Boon et al disclose the picture decoding method according to claim 8.

However, Boon et al does not explicitly teach wherein the flag information indicates that values indicated by display order information of the pictures are in non-sequential order, and

in the management step, a picture whose position is the earliest in display order among decoded pictures stored in the area is determined based on the display order information and the flag information, and the determined picture is determined as a picture to be removed.

In the same field of endeavor, Teo et al disclose wherein the flag information indicates that values indicated by display order information of the pictures are in non-sequential order (Col 1 Ln 29-40; Col 3 Ln 55-63), and

in the management step, a picture whose position is the earliest in display order among decoded pictures stored in the area is determined based on the display order information and the flag information, and the determined picture is determined as a picture to be removed (Col 5 Ln 5- Col 6 Ln 5).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the image coder of Boon et al with the method of Teo et al. It is well known knowledge that with motion prediction specifically B-pictures that the picture order becomes non-sequential. The advantage would be that it notifies the image coding system to correct the picture order sequence, which results in reduction in memory buffer, power consumption and cost (Teo et al; Col 6 Ln 7-11).

As per claim 11, Boon et al disclose the moving picture decoding method according to claim 8, further comprising an invalid picture storage step of storing an invalid picture in the area when values indicated by coding order information of the pictures are in non-sequential order ([0220]-[0222] and [0232]-[0240]),

in the management step, whether or not to store an invalid picture in the area is determined based on the flag information and the coding order information ([0232]-[0240]), and

in the invalid picture storage step, an invalid picture is stored in the area based on a result of the determination made in the management step ([0220]-[0222]).

However, does not explicitly teach wherein the flag information indicates that the values indicated by the coding order information are in non-sequential order.

In the same field of endeavor, Teo et al discloses wherein the flag information indicates that the values indicated by the coding order information are in non-sequential order (Col 1 Ln 29-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the image coder of Boon et al with the method of Teo et al. It is well known knowledge that with motion prediction specifically B-pictures that the picture order becomes non-sequential. The advantage would be that the it notifies the image coding system to correct the picture order sequence.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boon et al (EP 0 971 543 A1) in view of Teo et al (US 5,621,464), as applied to claim 9 above, and further in view of Asai et al (US 6,710,785).

As per claim 10, Boon et al disclose the moving picture decoding method according to claim 9.

However, Boon et al does not explicitly teach clip information is given to the decoded picture stored in the area, said clip information being updated; and

a picture whose position is the earliest in display order among the decoded pictures stored in the area is determined based on the clip information, and the determined picture is determined as a picture to be removed.

In the same field of endeavor, Asai et al does teach clip information is given to the decoded picture stored in the area, said clip information being updated; and

a picture whose position is the earliest in display order among the decoded pictures stored in the area is determined based on the clip information, and the determined picture is determined as a picture to be removed (Col 12 Ln 32 – Col 13 Ln 3).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to modify the image coder of Boon et al with the use of clip information of Asai et al. The advantage of modifying the image coder of Boon et al is that it aids in correctly sorting the clip information and display order of the video stream.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chikaodili E. Anyikire whose telephone number is (571) 270-1445. The examiner can normally be reached on Monday to Friday, 7:30 am to 5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272 - 7418. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CEA

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